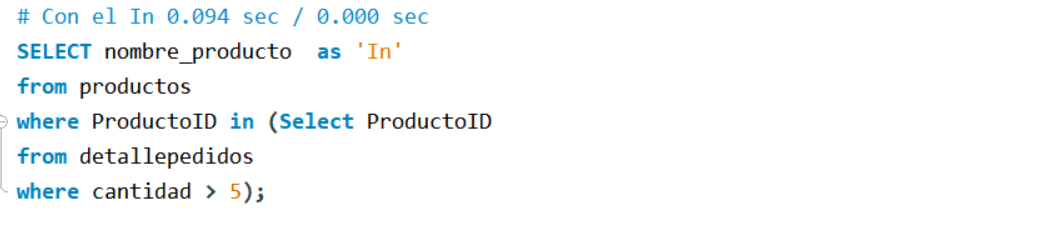
2. Optimización de consultas.

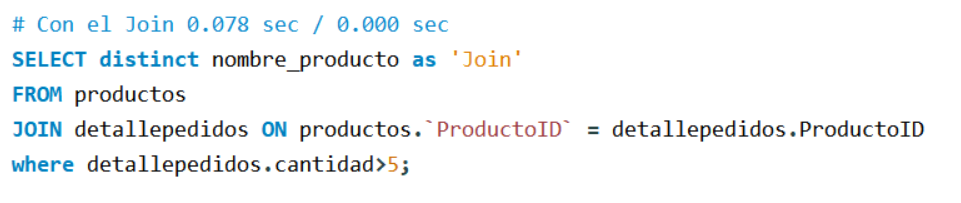
a. Crear una consulta SQL que permita obtener el nombre de los productos que figuren en algún detalle de pedido con más de 5 unidades vendidas (atributo cantidad) sin que figuren valores duplicados en el resultado. Definir diferentes variantes de la consulta de forma que se aprecien diferencias significativas entre ellas respecto al coste de ejecución.

In, Join, Exists, Inner join.

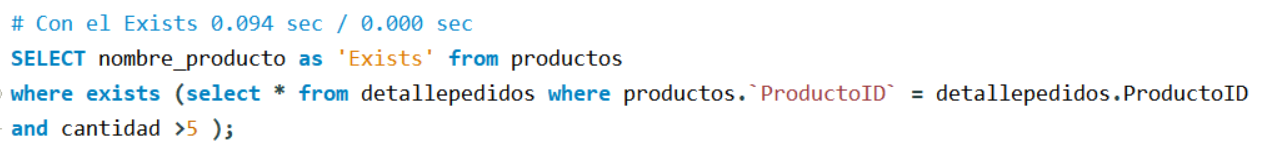
In



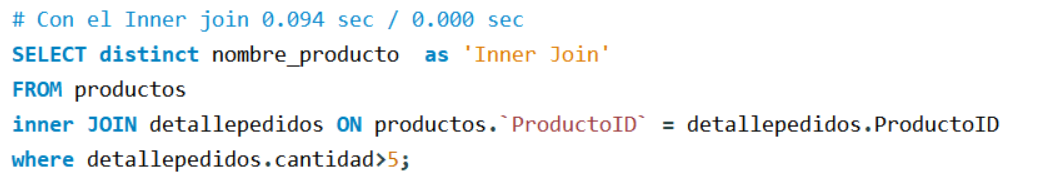
Join



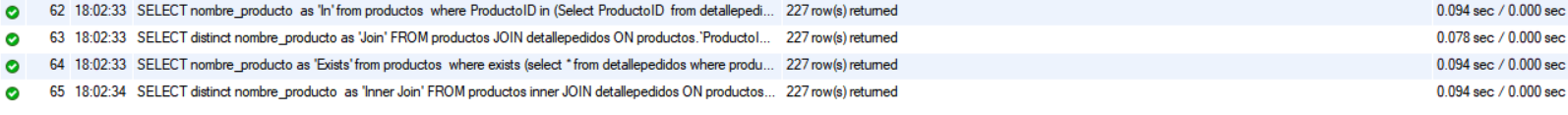
Exists



Inner join



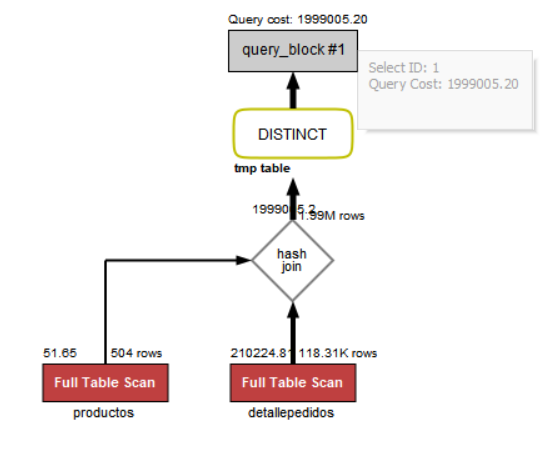
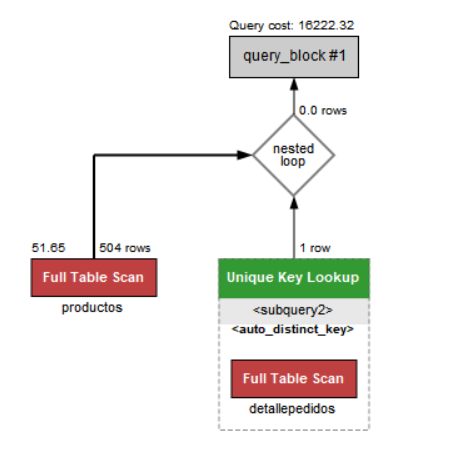
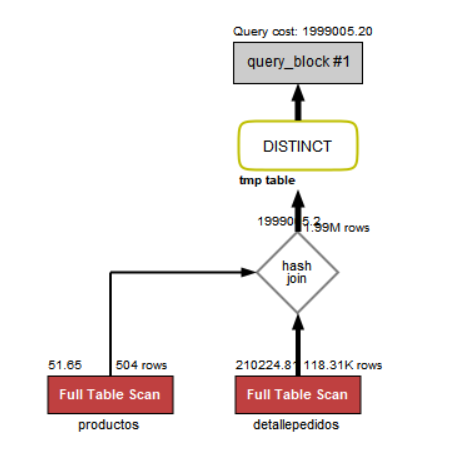
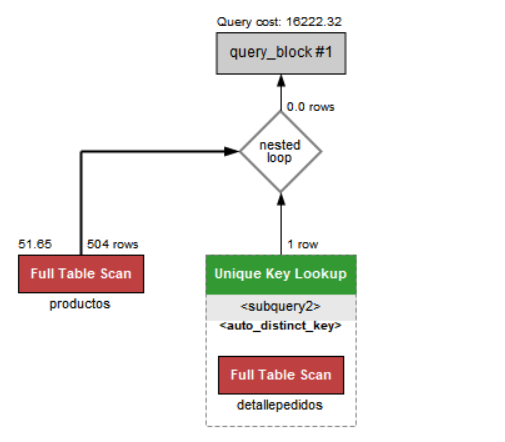
b. Estudiar el plan de consulta, tomando nota de los costes del mismo.



|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | In | Join | Exists | Inner Join |
| Duración Antes de Claves | 0.094 sec | 0.078 sec | 0.094 sec | 0.094 sec |

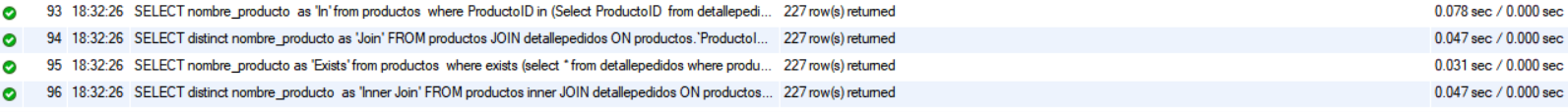
La consulta con el join tarda menos que las demás.

In, Join, Exists, Inner join.



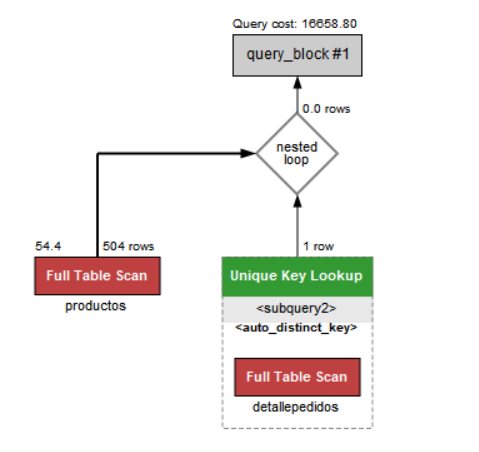
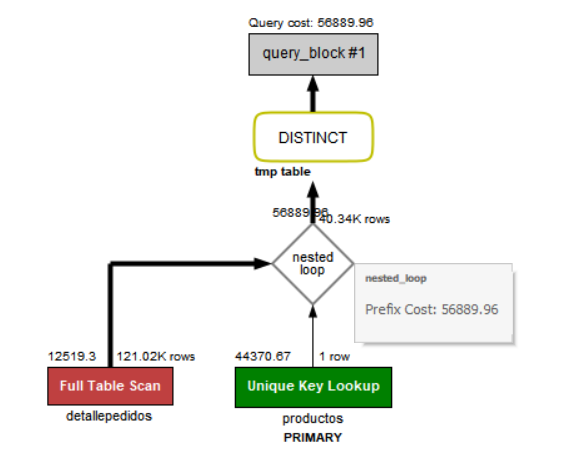
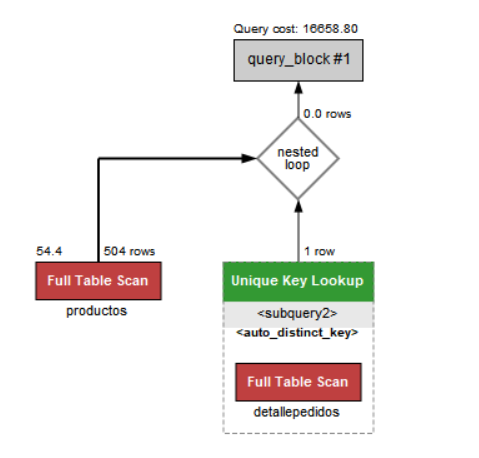
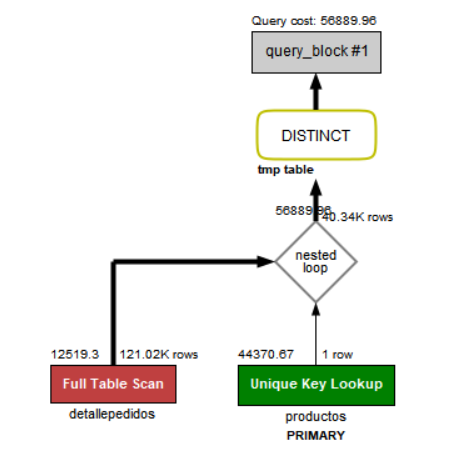
|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | In | Join | Exists | Inner Join |
| Coste | 16222.32 | 1999005.20 | 16222.32 | 1999005.20 |

c. Crear las claves principales mediante el fichero script CrearClavesPrimarias.sql y nuevamente estudiar el plan de consulta, comparando costes con el punto anterior.



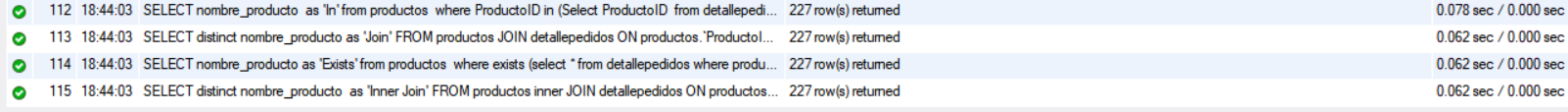
|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | In | Join | Exists | Inner Join |
| Duración Antes de Claves | 0.094 sec | 0.078 sec | 0.094 sec | 0.094 sec |
| Duración Después de Claves | 0.078 sec | 0.047 sec | 0.031 sec | 0.047 sec |

In, Join, Exists, Inner join.

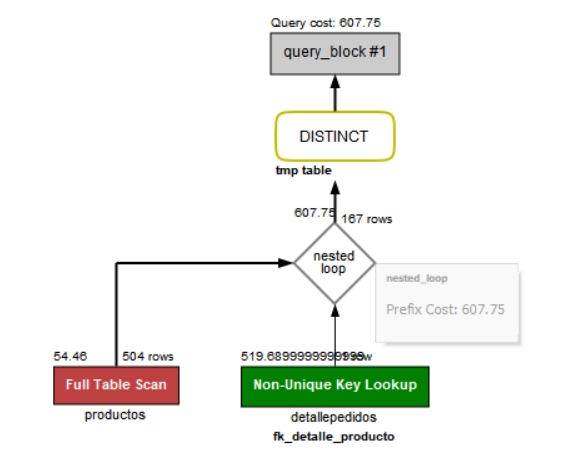
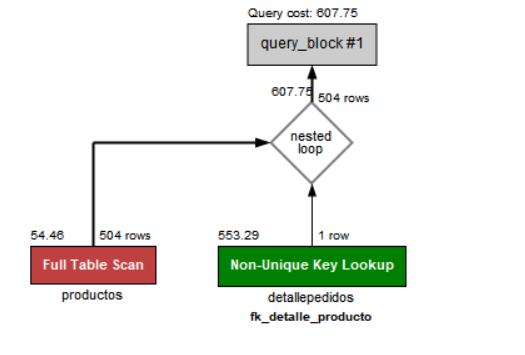
|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | In | Join | Exists | Inner Join |
| Coste Antes de Claves | 16 222.32 | 1 999 005.20 | 16 222.32 | 1 999 005.20 |
| Costes Después de Claves | 16 658.80 | 56 889.96 | 16 658.80 | 56 889.96 |

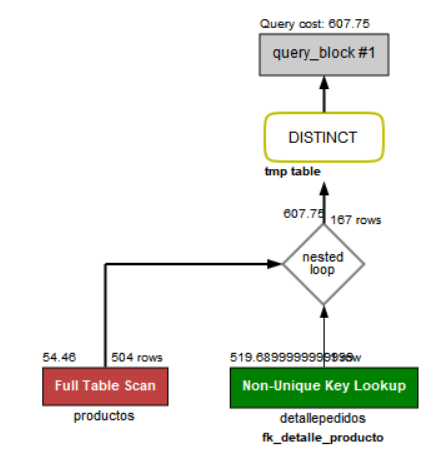
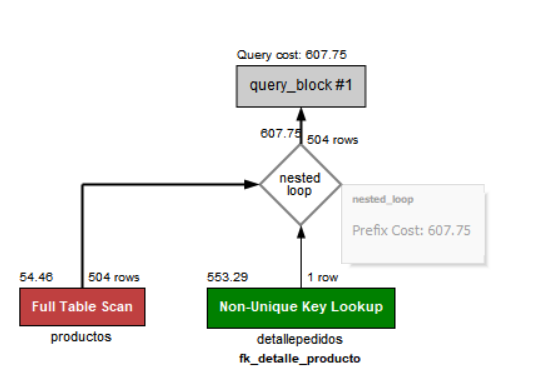
d. Crear las claves foráneas mediante el fichero script CrearClavesForaneas.sql, y nuevamente estudiar el plan de consulta, comparando costes con el punto anterior.



|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | In | Join | Exists | Inner Join |
| Duración antes de claves | 0.094 sec | 0.078 sec | 0.094 sec | 0.094 sec |
| Duración después de claves | 0.078 sec | 0.047 sec | 0.031 sec | 0.047 sec |
| Duración después de claves foráneas | 0.078 sec | 0.062 sec | 0.062 sec | 0.062 sec |

In, Join, Exists, Inner join.





|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | In | Join | Exists | Inner Join |
| Coste antes de claves | 16 222.32 | 1 999 005.20 | 16 222.32 | 1 999 005.20 |
| Costes después de claves | 16 658.80 | 56 889.96 | 16 658.80 | 56 889.96 |
| Costes después de claves foráneas | 607.75 | 607.75 | 607.75 | 607.75 |

e. Crear los índices que se estimen necesarios para mejorar la consulta.